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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,464	03/11/2005	Masashi Iwata	Q86804	3586
23373	7590	04/24/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, PHUONGCHI T	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

67

<b>Office Action Summary</b>	Application No. 10/527,464	Applicant(s) IWATA ET AL.	
	Examiner Phuongchi Nguyen	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 5, 7 and 8 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input checked="" type="checkbox"/> Other: <u>Attachment 1</u> .                    |

### DETAILED ACTION

1. Applicant's amendment of February 28, 2006 is acknowledged. It is noted that claim 1 is amended. Claim 2 is canceled. New claims 5-8 are added. Figures 7 and 8 have been accepted.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanazaki et al (US5739741).

In regards to claim 5, Hanazaki et al discloses a fuse (1) comprising a fuse body (of 1); a housing (10) having a tubular shape with a rectangular cross section, which is made of an insulative resin, and receives and holds the fuse body (of 1) therein, and into which the fuse body (of 1) is inserted through an upper opening (at one end of 10) in the housing (10) so that the fuse (1) is connected to mating terminals accommodated in the housing (10) and; and a cover (9) which is made of an insulative resin, and covers the upper opening (at one end of 10) in the housing (10), wherein the housing (10) comprises a pair of retaining portion (R1, R2) is formed on a first pair of opposite side surface of the housing (attachment 1 of final office action). "Corresponding to a retaining claw of a withdrawing jig for withdrawing the housing" is not positively recited in the claim.

In regards to claims 7 and 8, Hanazaki et al discloses the fuse wherein a pair of the retaining portions (R, R) (on both sides of 10) are provided on opposite side faces of the housing

(10) so that the retaining portions (R, R) are aligned in an extending direction of a fusible portion (body of 1)/terminal portions (body of 1) of the fuse body (of 1).

*Response to Arguments*

4. Applicant's arguments "Hanazaki teaches a pair of retaining projections for retaining the cover, but Hanazaki fails to teach or suggest a pair of retaining portions, corresponding to a retaining claw of a withdrawing jig for withdrawing said housing..." have been fully considered but they are not persuasive; because Hanazaki does have a pair of retaining projections R1, R2 as seen in the attachment 1. Examiner gives little weight "corresponding to a retaining claw of a withdrawing jig for withdrawing said housing"; as the intended use is not treated as imparting patentability to the claim. Hanazaki teaches a pair of retaining projections R1, R2. The pair of retaining projections are capable of being used for withdrawing the housing by a corresponding to a retaining claw of a withdrawing jig. All that being claimed is a pair of retaining projections; how it is used is not a patentable distinction.

*Allowable Subject Matter*

5. Claims 1 and 3-4 are allowed.

6. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In regards to claims 1 and 6, none of prior art teaches or suggest a fuse comprising a insulative resin cover covering the upper opening in the housing, a retaining portion corresponding to a retaining claw of a withdrawing jig the retaining portion comprises a first ridge portion protrudes from an upper portion of a side surface of the housing, and disposed

perpendicularly to a longitudinal axis of the housing and two second ridge portions protrude from the side surface of the housing extend perpendicularly from opposite ends of the first ridge portion, and parallel to the longitudinal axis of the housing.

*Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi Nguyen whose telephone number is (571) 272-2012. The examiner can normally be reached on 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2800 ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PCN

April 18, 2006

  
**TULSIDAS C. PATEL**  
**SUPERVISORY PATENT EXAMINER**



US005739741A

for 10/527464

# United States Patent [19]

Hanazaki et al.

[11] Patent Number: 5,739,741

[45] Date of Patent: Apr. 14, 1998

[54] METHOD OF INTERRUPTING CURRENT IN FUSE AND FUSE STRUCTURE

4,944,084 7/1990 Hanbe et al. 29/623  
5,528,213 6/1996 Kondo et al. 337/160

[75] Inventors: Hisashi Hanazaki; Mitsuhiro Totsuka, both of Shizuoka, Japan

## FOREIGN PATENT DOCUMENTS

[73] Assignee: Yazaki Corporation, Tokyo, Japan

A14241922 6/1993 Germany.  
62-1349 1/1987 Japan.  
5166453 7/1993 Japan.

[21] Appl. No.: 701,732

[22] Filed: Aug. 22, 1996

## Related U.S. Application Data

[63] Continuation of Ser. No. 495,106, Jun. 27, 1995, abandoned.

## [30] Foreign Application Priority Data

Jun. 30, 1994 [JP] Japan 6-149913

[51] Int. Cl.<sup>6</sup> H01H 825/04; H01H 85/08

[52] U.S. Cl. 337/290; 337/160; 337/198; 337/295

[58] Field of Search 337/160-165, 337/195-198, 262, 295, 296, 290; 29/623; 439/621, 622

## [56] References Cited

### U.S. PATENT DOCUMENTS

3,116,390 12/1963 Goody et al. 337/296

Primary Examiner—Leo P. Picard

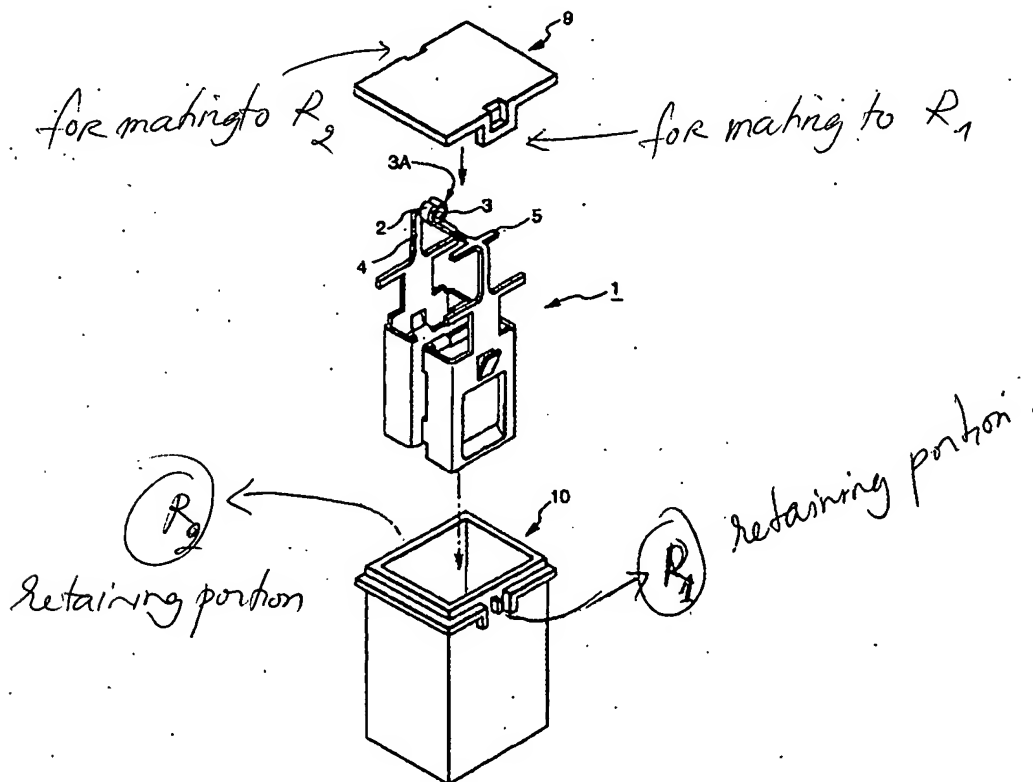
Assistant Examiner—Jayprakash N. Gandhi

Attorney, Agent, or Firm—Sughrue, Mion, Zinn, Macpeak & Seas, PLLC

## [57] ABSTRACT

A metal chip of low-melting metal having a cavity is fixedly held by an embracing portion of a fusible portion of a fuse of a fusible metal conductor. The metal chip has a predetermined outer diameter, and by changing a diameter of a through hole defining the cavity, the volume of the cavity can be adjusted. By doing so, fusion characteristics of the fusible portion can be adjusted.

4 Claims, 4 Drawing Sheets

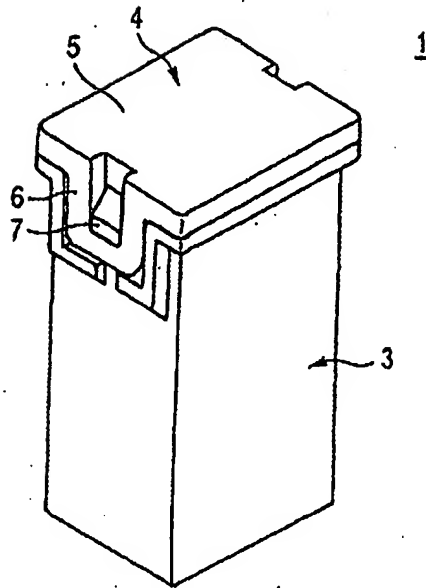


Attachment 1. (of final office action)



Approved 3/12/06 [Signature]

FIG. 7 PRIOR ART





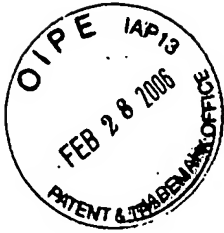
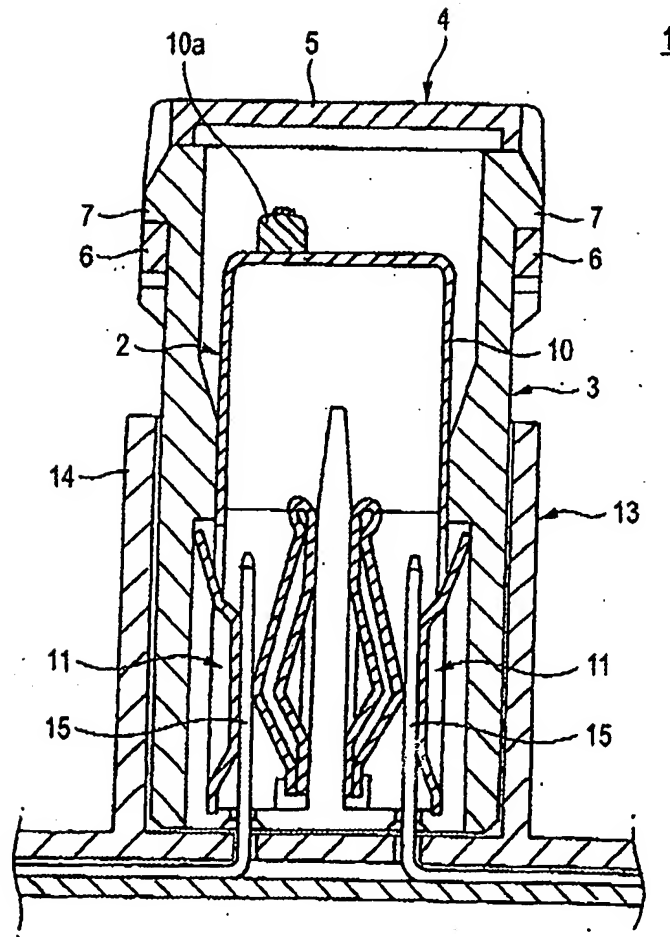


FIG. 8 PRIOR ART



Approved 3/12/06